



Always fresh

thanks to tailored automation

In EDEKA's NORDfrische Center in Lüttow-Valluhn, Germany, meat and meat products are packed for delivery to a total of 650 EDEKA stores. EDEKA stores can order from a wide range of goods – from 2,500 different kinds of meat products, cold cuts and sausages to be exact. Some of the goods are produced and processed at the Lüttow-Valluhn location, and some of them by external partners.

Supported by cutting-edge technology, the distribution center delivers fresh goods to EDEKA stores three to six times a week. The orders are store-specific: Each store has different requirements, orders and delivery intervals. Thanks to smooth logistics processes in the DC, timely store-friendly delivery is ensured in the right sequence.

NORDfrische Center

EDEKA NORDfrische Center

Sector	Food retail, production and distribution of meat and meat products
Location	Lüttow-Valluhn, Germany
System size	Approx. 8,000 m ² (around 86,110 ft ²)
Temperature	+ 2°C (around 275 K) in the entire distribution center
Performance	Retrieval of up to 40,000 containers per day
Technologies	OSR Shuttle™ with 70,000 storage locations across 10 rack line systems, automatic depalletizing and destacking machine in the goods-in area, powerful Streamline and Powerline conveyor systems, 4 Pick-it-Easy work stations, 16 work stations featuring KiSoft Pick-to-Light for processing fast-movers, 6 automatic stacking machines, KiSoft software package



“The partnership with KNAPP is based on solution finding. We had to overcome many challenges during the project due to the many specific requirements we had. But KNAPP was prepared to deviate from the standard, creating the ideal solution for us.”

Matthias Biermann
Manager Meat Production Facility, EDEKA Nord

Trend

Today, customers tend to prefer small quantities of packaged meat and meat products. This change in customer behavior is posing new logistical challenges to the meat industry and food retailers, since smaller pack sizes require higher storage capacity in distribution centers as well as shorter delivery and response times.

Consequently, the EDEKA NORDfrische Center is expecting that stores in urban areas will have to be supplied with fresh meat and meat products twice a day. To make this happen, the company has chosen to implement a tailored automation solution at their Lüttow-Valluhn location.

The solution ensures flexible and efficient processes, equipping EDEKA's distribution center for the future. KNAPP was chosen as the right partner to provide a suitable solution.

Efficient processes for store-friendly delivery

How goods enter the storage system

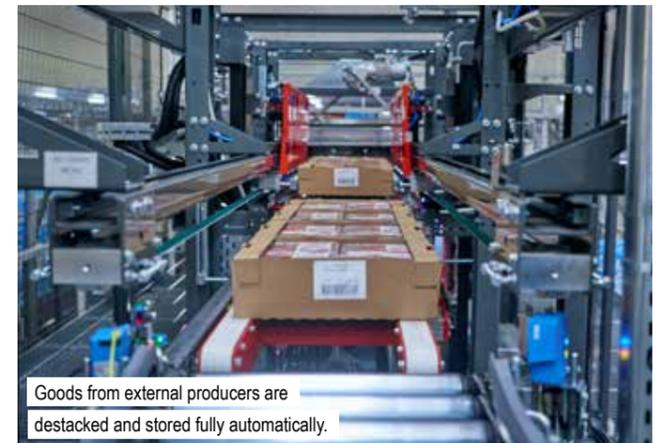
The distribution center in Lüttow-Valluhn is located right next to one of EDEKA's production facilities. Processed and packed goods from the production facility are conveyed to the picking and shipping area of the distribution center where they are temporarily stored in the OSR Shuttle™.

Goods coming from external producers are registered in the goods-in area, where they are prepared for storage in the system either by six employees at manual work stations or by an automatic depalletizing and destacking machine.

The machine destacks the handling units that arrive on pallets. This process is efficient, since two containers can be separated from the stack at the same time. As for cartons and containers, they are automatically conveyed on the Streamline conveyor system to the OSR Shuttle™.



A conveyor line connects the distribution center with the adjoining production facility.



Goods from external producers are destacked and stored fully automatically.



Manual depalletizing takes place at six work stations.



Orders are filled according to store requirements

Every EDEKA store can order the quantities they need from the assortment. Depending on the inventory turnover rate, these orders are filled in different areas of the warehouse.

The heart of the solution is the storage and picking system, the OSR Shuttle™. The system takes care of goods storage and picking, and conveys filled orders to the goods-out area. In ten rack line systems on 24 levels, 70,000 storage locations are available for space-efficient storage and order processing.

Fast-moving goods are manually picked from flow racks, with KiSoft Pick-to-Light guiding employees through the picking process. These work stations use light signals to show the employees which item goes into which container. The employees take out the item, scan it and place it into the indicated order

container. The OSR Shuttle™ makes sure that the flow racks are supplied with source containers.

Medium- and slow-moving goods are processed at the ergonomically designed goods-to-person work stations of the Pick-it-Easy series. There, the containers automatically retrieved from the OSR Shuttle™ are provided to employees at the ideal height. Thanks to the easyUse interfaces, the Pick-it-Easy work stations allow orders to be easily and intuitively processed, with all relevant information being displayed for the employee to see. These work stations also take the physical strain off employees, since work processes are ergonomically designed and employees no longer have to walk long distances during picking. This results in higher productivity and job satisfaction.

Orders are prepared for store delivery

Once all containers are ready, whether they contain the full quantity or less, they leave the OSR Shuttle™ in the ideal sequence. For the retrieval, criteria such as store-friendly sequence, stable stacking and high density on the load carrier are taken into account.

At six fully automatic stackers, the containers are placed onto different load carriers. On peak days, up to 40,000 containers are prepared for delivery to the EDEKA stores. Depending on the requirements, the containers are palletized on roll containers or pallets, or are loaded into insulated containers. Insulated containers are commonly used for long-distance transport, as they ensure that the cold chain is maintained.

“In retail, some items from a specific goods range need to be transported separately from the rest. So KiSoft makes sure that certain goods aren’t mixed up during picking.”

Matthias Biermann
Manager Meat Production Facility, EDEKA Nord

Tailored software makes timely delivery possible

The software running in the background serves as the master mind, ensuring that the different components and processes mesh harmoniously with each other. In the distribution center, the tailored software solution KiSoft efficiently controls the goods flow, making sure that the shelves in EDEKA stores are always full of fresh goods.

Matthias Biermann, Manager of the Meat Production Facility for EDEKA Nord, explains how the software also helps them schedule personnel: “Thanks to the KiSoft solution, we can better plan the tasks our employees perform in the warehouse. Learning how to handle the software is easy, since the interfaces are user-friendly and similar across the board – whether in the picking area, shipping area or goods-in area.”

“Stores benefit from fast and store-specific delivery: The right quantity is loaded onto the load carriers according to store requirements, allowing employees to fill store shelves with all the goods in one go.”

Roland Saad
Project Manager, KNAPP Systemintegration



The KiSoft software ensures that all systems mesh with each other harmoniously.

Always on top of things – optimal communication with all systems

The KiSoft AppSuite warehouse management system keeps track of the order once it has been communicated by the higher-level SAP system. KiSoft AppSuite also coordinates all process steps in order planning. As early as during container storage, the software records all relevant information to devise intelligent strategies for storage.

With regard to single items, KiSoft AppSuite calculates which item goes into which container. In the process, the software factors in container volumes as well as criteria for item separation to use space to the maximum.

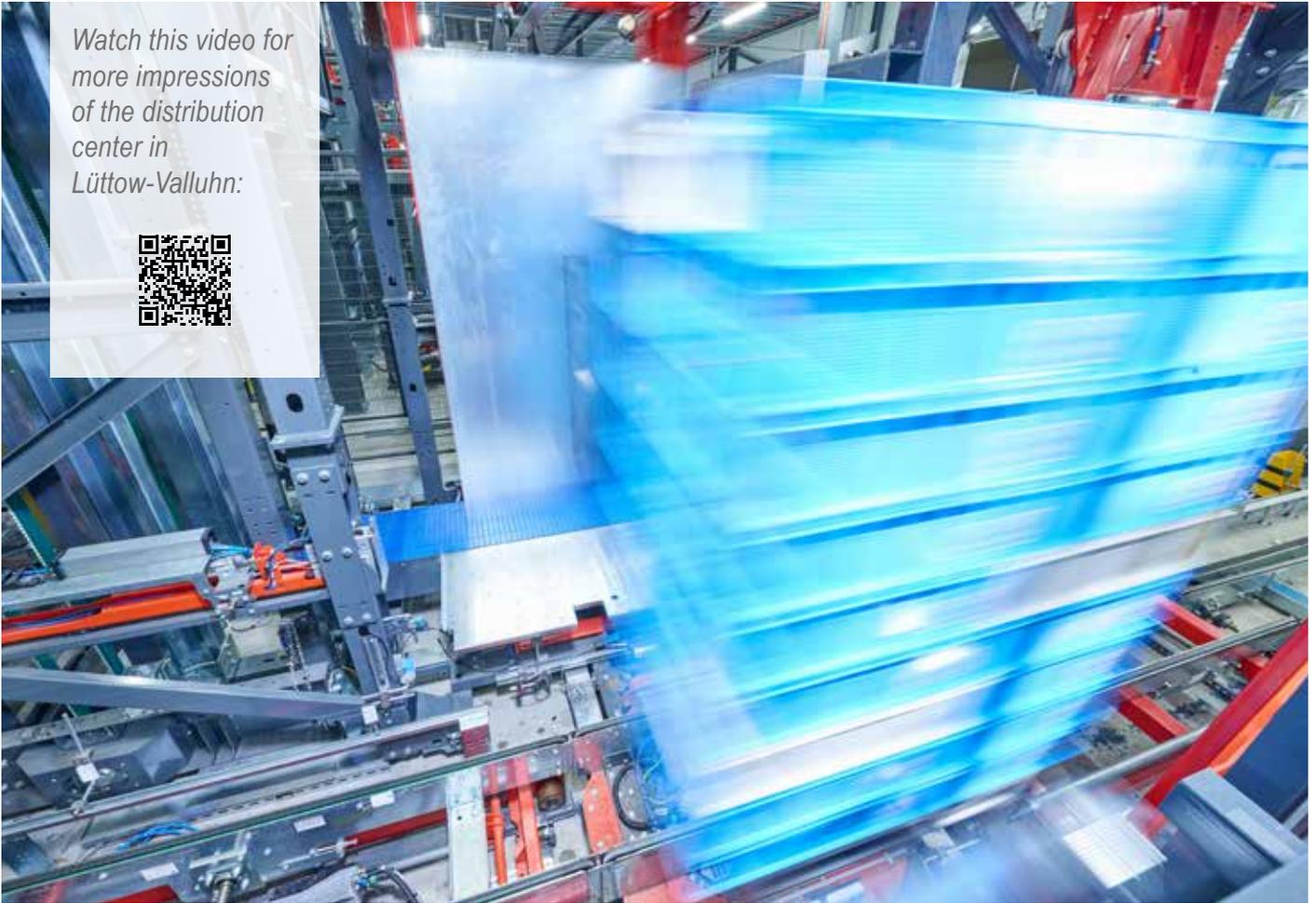
The EDEKA NORDfrische Center benefits from KiSoft AppSuite in a number of ways, as the software knows how many goods are on hand in all areas at any given time. This ensures that customer orders are well coordinated and delivery routes are optimal.

Efficient order processing and store-friendly delivery

The KiSoft warehouse control system (WCS) checks the availability and workload of every picking area and stacker. To guarantee short transit times, orders are distributed efficiently to the right areas, making goods available for delivery at the right time.

KiSoft WCS also controls the palletizing process. While making sure that orders are palletized in the ideal sequence and are prepared according to store, the software uses space on the load carriers effectively. This way, walking distances for employees working in the stores are minimized.

Watch this video for more impressions of the distribution center in Lüttow-Valluhn:



Store-friendly delivery



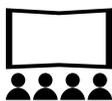
Tailored degree of automation



Space-effective design allowing maximum throughput



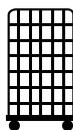
Different types of goods are kept separate



Short training times for employees thanks to intuitive user interfaces



Short transit times thanks to intelligent software solutions



Fully automatic loading of different load carriers



Future expansion and possibilities for adaptation